Achieving the vision

1991 *report*

Alberta
EDUCATION

Alberta. Alberta Education.
ACHIEVING THE VISION 1991 REPORT

ISBN 0-7732-0733-3

1. Education — Alberta — Aims and objectives. 2. Educational evaluation — Alberta. 3. Education — Alberta — Evaluation. 4. Education and state — Alberta. 5. Educational accountability — Alberta. I. Title.

LB2822.75.A333 1992

Copyright 1992, the Crown in Right of Alberta, as represented by the Minister of Education. Alberta Education, Policy and Planning Branch, 11160 Jasper Avenue, Edmonton, Alberta T5K 0L2.

Permission is hereby given by the copyright owner for any person to reproduce this publication or any part thereof for educational purposes and on a non-profit basis.

92-04500/

Message from the Minister of Education

We have a lot to be proud of in our education system. We have educated pilots who navigate Canadian and international skies. We have graduated medical researchers who enable us to live longer, more vibrant lives; farmers and ranchers who feed our country — who feed the world. Sales clerks, truck drivers, construction workers — people who are the backbone of our province. Authors and artists who inspire us. All of these people make a contribution in part because of our education system. An excellent education system is the foundation for a healthy economy and a vibrant society.

I'm proud of our Provincial Government's commitment to education. And I'm proud of the efforts of educators, parents and trustees who are working to make it even better. The accomplishments and changes in education will ensure that together, we will build a strong legacy of excellence for all of Alberta's children.

In November 1990, I outlined our government's vision for education in Alberta that would guide educational improvements over the next decade. The vision's main message is excellence for all students. It includes challenging our most capable students, improving results, disabled students taking their full place in the classroom, equity in financial and educational opportunities, building a strong future in science, and building partnerships with parents, businesses and communities.

Vision for the nineties . . . a plan of action, published in October 1991, spells out the initiatives that will enable us to give all children the best possible education — to achieve their potential and nothing less.

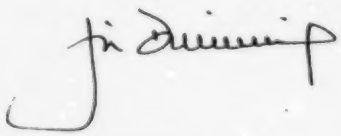
In November 1990, I also said that we would report regularly to Albertans on our progress toward achieving the vision. I am pleased to table this first report. It gives Albertans a benchmark that shows where we are now, where we need to do better, and what we're doing to improve.

Overall the message is clear: Alberta has a good education system and a sound foundation to build on. But we still have improvements to make so that all our young people continue to get the education they need to be successful.

We have good news to report in many areas. We also have some bad news and no news in other areas. We state where things stand. A major shortcoming of this report is that it does not include much information about the results that schools, school systems, and our other partners are achieving to make the vision a reality for our students. And we still need to fill many information gaps so that we can do a better job of reporting how kids are doing and what is happening as a result of our individual and collective efforts.

What do we expect Albertans to do with this report and *Vision for the nineties . . . a plan of action*? First, we want you to see that Alberta's students are achieving solid results. Second, we want you to ask how your own schools and school systems are doing in these priority areas. Most importantly, get involved and assess your local needs, set goals, and take action that will help move education forward!

I ask for your continuing assistance in achieving excellence in education for our students. We have the groundwork well in place, and if we continue to work together we will attain the standard of excellence—the vision achieved. Next year's report will tell us how well we are meeting this challenge.



Jim Dinning
Minister of Education

Table of contents

Introduction 1

Superior standards and results 4

Excellence in curriculum 10

Strong basic skills 14

Students stay in school 17

Success for Native children 20

Success for immigrant children 22

Doing what's best for disabled students 24

Challenging our most capable students 27

Excellence in science 30

Excellence in teaching 34

Excellence in schools 37

Equity of opportunity for students 40

Building partnerships 42

Next steps 44

Contact list for additional information 45

References 46

Introduction

Assessing the performance of Alberta's large and diverse education system is a major challenge. About 500,000 children are in Alberta's schools (Early Childhood Services through grade 12). The students attending our 1,600 schools represent 20% of the population of this province. More than 29,000 certificated staff — classroom teachers, administrators, school counsellors, librarians and other professionals — help these students to learn.

Programs and services to students are provided in a wide range of schools and settings. A grade 11 student in Alberta may attend a large city school with an enrollment of 2,000 and many different courses to choose from, or a smaller city high school focusing on fine arts or academic challenges, or a one-room school with about 20 students in seven grades (or more) where most of the courses are offered through distance education. A student may travel 50 miles to school or walk across the street. A school may focus on early intervention for young children at risk, provide hot lunches, or specialize in winning prizes at the annual science fair or volleyball tournament — or do all of these things.

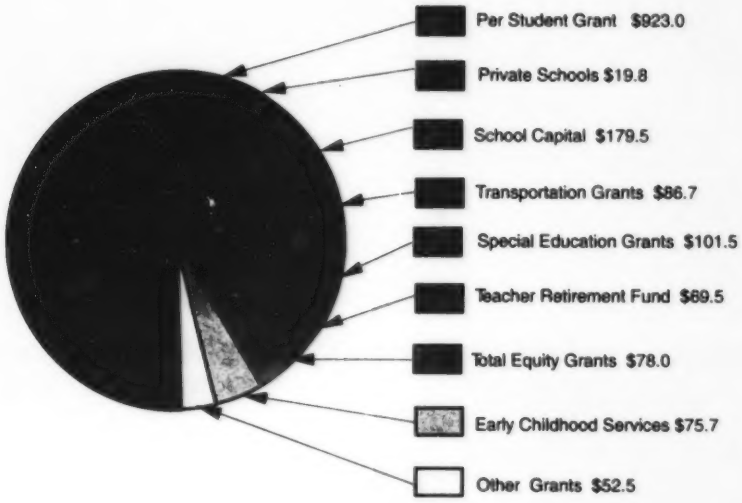
Alberta schools respond to the individual and often exceptional needs of the students they serve including their social and health needs. And they do this while keeping the ultimate goal in mind: to help students learn.

Taxpayers invested $2.5 billion in education in 1990-91; that is $12.5 million per day which means about $27 per student for each day of instruction. By investing over $5,300 in each student, Albertans are currently providing about $160,000 per classroom.

The funding of schools in Alberta is shared by the provincial government and locally elected school boards. The provincial government provided more than $1.58 billion (see Figure 1) of the $2.5 billion that supported education in 1990-91.

Figure 1

Provincial financial assistance to schools in Alberta: 1990-91 fiscal year (in millions)



Total: $ 1.58 Billion

***Source:** Alberta Education*

This report has three major purposes.

- It provides an accounting to Albertans of the results achieved with the $2.5 billion of taxpayers' money invested in education in 1990-91.
- It provides opportunities for Albertans to discuss the results achieved (and those not achieved) in the education of our students.
- It helps all partners in education identify what areas need improvement; it provides basic information we can use to assess whether desired improvements are indeed being achieved.

The report highlights results — what provincial data tell us about where we are now in the 13 priority directions identified in the action plan. This document also highlights what we are doing to make education better for our students.

Superior standards and results

High standards, improved results: *Our standards must be the highest in Canada and among the highest in the world. We must ensure that Albertans are well informed about the results our students are achieving.*

Results expected

- *Alberta's student achievement standards are among the highest in the world*
- *Alberta students attain superior results*
- *Albertans are provided with timely and useful information on how our student results compare nationally and internationally*
- *Albertans are well informed about educational standards and results and have confidence in education*

vision for the nineties . . . a plan of action

What we know

- **Student achievement in grades 3, 6, and 9 has improved since 1983 but** not enough students are meeting acceptable standards. Our top students are doing very well except in grade 9 social studies where not enough students are meeting the standard of excellence.

Achievement tests assess how well students are meeting provincial curriculum standards in the core subjects — language arts, mathematics, science and social studies. About 90% of students in grades 3, 6 and 9 wrote the grade 3 science, grade 6 math, and grade 9 social studies tests in June 1991.

Two test scores are set — one to define acceptable performance on the test, and another to define excellence. To meet the acceptable standard, students must demonstrate the knowledge and skills required to proceed to the next level in a subject. The excellent standard indicates superior achievement in these areas. We expect 80% of students to achieve the acceptable standard and 10% of those to achieve a standard of excellence.

Grade 3 Science: We expect students to understand basic concepts about plant and animal life, matter and energy. They need to develop and be able to use the skills of observing, classifying, measuring, and communicating, in learning about their world. In 1991, not enough students achieved these standards (70% of the students instead of the expected 80%). However, slightly more than the expected number of students achieved the standard of excellence (11% compared to the 10% expected).

Grade 6 Mathematics: In mathematics, students are expected not only to know how to add, subtract, multiply, and divide, but also to use their knowledge of numbers, graphs, measurement, and geometry in solving real-life problems. In 1991, although most students had learned their basic facts, not enough could apply their knowledge and skills to real-life situations (69% of the students versus the expected 80%). However, the number of students achieving the standard of excellence exceeded expectations (14% versus the 10% expected).

Grade 9 Social Studies: In grade 9 social studies, not enough students met either the acceptable standard (68% of the students versus the expected 80%) or the standard of excellence (5% versus the expected 10%). Students' weak performance in recalling and applying certain facts and concepts suggests that a number of students have not learned

the content of the course in sufficient depth; they do not adequately see the relationships among the concepts and how this knowledge relates to the world beyond the classroom. The results show that many students were also weak in using their knowledge of economic and political systems to support a written position on a selected topic.

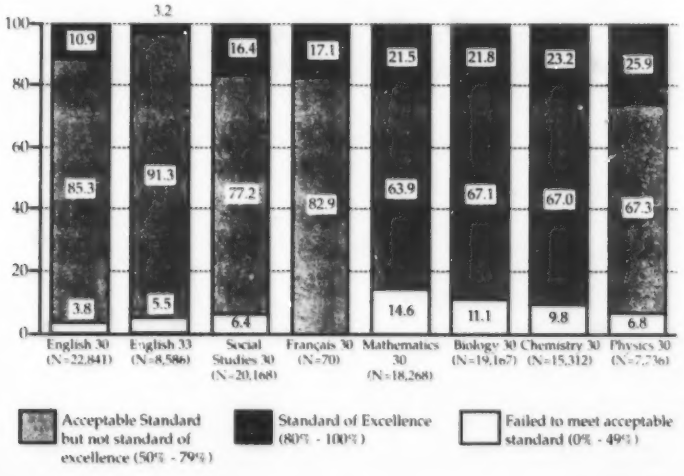
A special study of changes in achievement over time was carried out in 1991 as part of the provincial assessment. Results showed that achievement levels in 1991 in grade 3 science and grade 6 mathematics were higher than in 1983 and 1987. In grade 9 social studies, results showed achievement was higher in 1991 than in 1983 but remained the same as in 1987.

- **Senior high students are doing well in all diploma exam courses** except Mathematics 30.

  The diploma examinations test the knowledge and skills of individual students in eight courses: Biology 30, Chemistry 30, English 30, English 33, Français 30, Mathematics 30, Physics 30, and Social Studies 30. Students' final marks in these courses are made up of 50% from the diploma exam and 50% from the classroom teacher. Students may write in January, June or August. A total of 44,150 students wrote one or more diploma exams in the 1990-91 school year.

Figure 2

Percentage of students meeting the acceptable and excellent standards and percentage failing (final marks) for the 1990-91 school year



***Source:** Alberta Education*

In 1990-91, the percentage of students passing diploma exam courses increased or stayed about the same. Figure 2 presents information about student achievement on the grade 12 diploma examination courses for the entire 1990-91 school year (January, June, August). The number of students who wrote the exam in each course is included as well as the percentage of students who met the acceptable and excellent standards, and the percentage who failed the course.

The standard of excellence for final marks in diploma exam courses is 80% or higher. Over the past three years about 10% of students achieved excellence in English 30, about 15% in Social Studies 30, about 20% in Biology 30, Chemistry 30, and Mathematics 30, and about 25% in Physics 30.

In June 1991, 34.5% of the 10,278 students who wrote the Math 30 diploma exam failed. Teachers failed 11.3% of these students on their school work. When the exam marks and the school marks were combined, 19.1% of the students failed the course. This was the highest failure rate for Math 30 students since exams were reinstated in 1984. When the marks for the three examination writings in 1990-91 (January, June, August) are blended with the school awarded marks and taken into account together, the overall Math 30 failure rate was 14.6% (see Figure 2).

Since 1984, expectations in math have increased. The Math 30 exam places greater emphasis on solving multistep problems and applying math concepts in unfamiliar and real-life situations. Many students have difficulty applying their math knowledge in these ways. They do not understand some concepts in sufficient depth.

- **Alberta's expectations for student writing have increased.**

  A study of satisfactory and excellent student essays from the 1984 and 1990 diploma examinations in English 30, Social Studies 30, and English 33 showed that most of the 1984 essays would have received a lower rating had they been written for the 1990 exams. However, a similar proportion of students achieve at the satisfactory and excellent levels today. Teachers who mark the diploma exams in English and social studies report that students' writing continues to improve each year.

- **Albertans want clear educational standards.**

  A 1988 survey of Albertans found that over 90% said students learn better when it is clear what standards are expected (Gallup, 1988).

- **Alberta students rank high in science compared to other provinces.** Internationally, our junior high students are third in science but are at the middle in math. Senior high students did not do well enough on international tests conducted in the mid-eighties.

  In the mid-eighties, Canada participated in the Second International Science Study conducted by the International Association for the Evaluation of Educational Achievement (IEA). The Canadian sample consisted of about 20,000 students.

  Within Canada, Alberta's elementary and junior high students ranked fifth among the 10 provinces on the grade 5 core science test and first on the grade 9 core test. Compared to the other countries, Canada ranked sixth among 15 countries at the grade 4/5 level, and fourth of 17 countries at the grade 8/9 level.

"Nationally, Alberta students ranked first in science and fifth in mathematics. . . ."

  Grade 12 results were not good enough. Although Alberta ranked among the top provinces (third in biology, fourth in chemistry, second in physics), all provincial averages were below the international average. Canada ranked near the bottom of 13 participating countries on these tests at the grade 12/13 level. The low standing was partly due to more Canadian students taking science courses compared to students from other countries: 28% took biology, 25% chemistry and 19% physics. Many countries had fewer than 10% of their senior students taking these courses (IEA, 1988 and Crocker, 1990).

  In 1991, Alberta participated in the International Assessment of Educational Progress II (IAEP II). Almost 2,900 students in 119 Alberta schools participated in this assessment of 13 year olds in mathematics and science. Nine provinces and 20 countries participated in this assessment; 15 countries included a representative sample of students and five included special populations. Nationally, Alberta students ranked first in science and fifth in mathematics. Internationally, Alberta students ranked third in science and in the middle on mathematics compared to the 15 countries with representative samples. Canada ranked ninth on both tests (Educational Testing Service, 1992).

- **Alberta students rank fourth in geography in national and international comparisons.**

  The 1991 International Assessment of Educational Progress II included an optional geography component. Nine countries and seven provinces participated in the geography assessment of 13 year olds. Alberta students ranked third compared to students in other provinces and fourth compared to students in all countries and provinces participating.

What we are doing

- **To provide Albertans with better information about what's expected** of our students in selected areas of learning, Alberta Education is publishing samples of how students write. In cooperation with the business and professional communities, samples of problems that show real-life applications of math are also being published.

- **We are revising our provincial assessment programs to keep up-to-date with current thought and practice.**

  We are improving the Achievement Testing Program to assess a wider range of learnings and to support teachers in their efforts to address each student's instructional needs. For example, we are focusing on assessing participation skills in grade 3 social studies, listening skills in grade 6 language arts, and problem solving skills in grade 9 mathematics. We are also developing portfolios of student writing in grade 3.

  Our diagnostic programs help teachers to meet the needs of individual students. We are revising the Diagnostic Reading Program to support language learning instruction and we are continuing to inservice teachers in the use of the Diagnostic Mathematics Program.

  We are completing the development of the *Evaluating Learning and Communication Processes Program* to assist teachers in addressing the learning needs of grade 7 to 10 students in language arts, science, and social studies.

- **In addition to school board expenditures, the Alberta Government** currently dedicates more than $6 million for student assessment programs or about $14 per student.

- **Alberta is continuing to participate in national and international** studies to tell us how well our students are doing compared to other students in Canada and around the world.

  In cooperation with other provinces, we are completing the development of the assessment instruments for reading, writing, and mathematics for Canadian students aged 13 and 16. The School Achievement Indicators Program, sponsored by the Council of Ministers of Education, Canada, is examining the participation and graduation rates of young Canadians and assessing the reading, writing, and mathematics knowledge and skills of 13 and 16-year-old students. Alberta and Québec are taking the lead in developing the assessment instruments. Results are expected in 1993 and they will tell us how Alberta students compare nationally in these areas of learning.

  Alberta will participate in the Third International Mathematics and Science Study being planned by the International Association for the Evaluation of Educational Achievement (IEA). About 36 countries will participate in the study which will involve students aged 9, 13, and those in the last year of full-time compulsory secondary education. Student assessment is scheduled for 1993-94.

- **The Alberta Government will continue to ask Albertans — students,** parents, employers, the public, and others — how satisfied they are with Alberta's education standards and the results our students are achieving. The views of Albertans help us to review and adjust our standards and expectations for student achievement.

- **We continue to work on provincial educational performance** standards and measures as well as assisting school jurisdictions to collect and report information at the local level. These are important for assessing how well our students and the education system are performing, making needed improvements, and keeping Albertans well informed.

- **We are focusing more effort on implementing a province-wide** student information system so that we are better able to track student participation and progress in school.

Excellence in curriculum

Curriculum focuses on student learning: *Our curriculum must set high expectations for what our students need to know and be able to do in our changing world. Our programs and learning resources must support the achievement of these high expectations.*

Results expected

- *Alberta's curriculum standards are among the highest in the world: the standards clarify what students are expected to learn, and this enables teachers to focus their teaching efforts on helping each student achieve these high educational standards*
- *Parents, the business community, and the public are well informed about student learning expectations and achievements*

continued on next page

What we know

- **Alberta Education has done extensive and ongoing curriculum** revision and new curriculum development since the mid-1980s. Some highlights:

  Since 1988 high school diploma requirements are more rigorous. Most students must take more courses in science, mathematics and social studies. Prior to 1988, only 45 of the 100 credits required for a General Diploma were specified by the province. Now the province prescribes 62 of the 100 credits to meet the changing needs of the individual student and society.

  Curriculum design focuses more closely on the needs of the students, emphasizes critical and creative thinking skills, encourages the use of technology, and gives business, industry, parents and community members a more active role in curriculum decisions.

  Since the release of the Provincial Government's Policy Statement on Secondary Education in 1985, all secondary courses in place before 1985 are being reviewed and revised as necessary to make sure that they are still current and appropriate for students who will be living in the 21st century.

  More than 100 courses have been developed or updated in consultation with teachers, parents, the private sector, government agencies, and other partners. These include the Integrated Occupational Program, and new courses in social studies, science, Career and Life Management, and junior high ethics, business studies, and agriculture.

  Our work in curriculum preparation has been successful. Several of our curriculum resources have received awards. For example, our ethics videotapes received provincial and international awards. A mathematics video prepared for grades 10 and 11 students got an Award of Merit from the Association for Media and Technology in Education-Canada (AMTEC). Other provinces and countries have asked if they can use all or part of several of our resources and programs.

- **Students and the public rate the quality of education as good.**

  Four out of five recent high school graduates rated the quality of the education they received in high school as good, with one in four rating it as "very good" (Alberta Advanced Education, 1988).

- *High school graduates have the knowledge, skills and attitudes that enable them to be successful in the workplace, in Alberta, in Canada and internationally*
- *High school graduates are well prepared for the challenges of universities, colleges, technical institutes and other post-secondary training*
- *All students are well prepared for the rights and responsibilities of citizenship and daily life in a changing society*

In a 1988 Alberta survey, 95% of respondents said that preparation for the world of work was important or very important. One out of three said this goal was being achieved well or very well; however, about half said this goal was not being achieved well enough (Gallup, 1988).

Approximately one of every two Albertans surveyed in 1991 is satisfied that schools prepare students to be good citizens and to succeed in college and university studies. However, fifty percent of Albertans are dissatisfied with students' preparation for direct entry into the labor force (see Table 1).

Table 1
Public satisfaction with schools' preparation of students beyond high school (1991)

Public satisfaction with schools' preparation of students:	*Satisfied* %	*Dissatisfied* %	*Don't know/ No response* %
to become good citizens	*54*	*35*	*11*
for college and university	*48*	*38*	*14*
for direct entry into the labor force	*38*	*50*	*12*

Source: *Population Research Laboratory, University of Alberta*

What we are doing

- **We are continuing to refine the provincial curriculum so students** learn the things they need to succeed, can adapt to constant and rapid change throughout their lives, and are able to compete in a global economy. The Alberta Government currently invests more than $7 million in the development and improvement of the provincial curriculum.

  One innovative program now under development is Career and Technology Studies (CTS). It includes areas such as communications, information processing, management and marketing, and tourism. The CTS program will give students the opportunity to link theory and practice, and to apply the knowledge, skills, and attitudes developed in core courses to their daily lives and the workplace. CTS will prepare

students for careers in highly skilled and technical fields. Expectations for student achievement in CTS will be consistent with the entry-level standards set by business, industry, and post-secondary institutions.

Two draft CTS programs, "Tourism" and "Enterprise and Innovation," are being field-tested in 1991-92. Several other CTS courses such as information processing, design, construction technologies, and food studies are being drafted this year for field-testing in 1992-93.

Improvements continue to be made in elementary mathematics and science programs, and in senior high science.

- **We continue to work on specifying more clearly the knowledge,** skills, and positive attitudes that students are expected to learn.

  To help describe what students should know and be able to do, new programs are being organized by "levels." For example, the new elementary language learning program has seven levels, which describe the development of language in the elementary school years. Samples of children's language that exhibit each of the seven levels of language performance are being prepared in 1991-92. The samples will help teachers assess each student's language performance so that planning for learning activities can build on what a student already knows and can do. The assessment and reporting of student progress will be anchored in a common set of expectations so that there is more continuity in learning for students from year to year, teacher to teacher, and school to school.

  A levels-based curriculum will enable students, parents, teachers, employers, post-secondary institutions, and other Albertans to be better informed about what students are learning.

"... student progress will be anchored in a common set of expectations ..."

- **At a forum on secondary education (September 1990), people told us** that we need to review the graduation requirements. We currently have two diplomas — general and advanced. Both require the same number of credits but the advanced diploma allows less choice in courses than the general diploma. In June 1991, we released a proposal for a single diploma with specializations. The specializations would enable increased choice for students who have special talents and interests and provide an opportunity to have these talents and interests recognized. We're now considering carefully the comments that Albertans sent us as we do further work to revise diploma requirements and determine how to recognize specializations.

- **We are continuing to make the curriculum more integrated so that** students can better understand the connections among different concepts, skills, and subject matter and use these understandings in their daily lives. For example, we have prepared resource materials and held workshops to help teachers enhance students' thinking and research skills across grades and subjects.

- **Alberta Education is developing a Japanese as a second language** program which can be offered in the elementary, junior and senior high schools of Alberta. The "beginning" level program is being field-tested during the 1991-92 school year. Student enrollments have doubled from 250 in 1990-91 to 525 this year. Ten school jurisdictions offer Japanese in fifteen schools. With Japan being one of Alberta's most important trading partners, learning Japanese will play a key role in Alberta's economic activities. Future Asian language programs will include Mandarin, Cantonese and Korean to help our students compete successfully in the world economy and improve our economic development.

- **We are working on getting more Albertans involved in revising** programs and selecting learning materials for young Albertans. We are making more effort to survey students, two to ten years after they graduate, about the value of their education — for success in the workplace, for post-secondary studies, and for citizenship. We will give more attention to asking employers, post-secondary instructors, and other Albertans to rate the knowledge and skills of our high school graduates. As well, we are focusing on keeping Albertans more informed about provincial curriculum standards and achievements through our partnership networks and through future reports on results.

Strong basic skills

Students learn basic skills: *We must ensure that all students develop strong skills in reading, writing, computing, and spelling. These are the foundation for the higher level skills students need in our rapidly changing world.*

Results expected

- *Young children at risk are provided with a full range of educational and support services to ensure they have a fair and equitable chance to succeed at school*
- *All students have a solid foundation in reading, writing, computing and spelling, and are able to think and apply their knowlcdge*
- *All students communicate well verbally and in writing*

vision for the nineties . . . a plan of action

What we know

- **Achievement test results show some basic skills are improving but** others need better development.

  Student performance on the 1991 provincial achievement tests indicates that:

  Grade 3 students could recall scientific facts and concepts that they had experienced directly or were taught.

  Grade 6 students could do basic math very well. They could solve one-step problems and complete basic, routine operations such as multiplying and dividing accurately. They had difficulty with multistep problems.

  On the grade 9 social studies achievement test, most students could state a position, but they tended to use emotional language and limited supporting information in defending their position. Many had difficulty applying their knowledge in discussing real-world problems. About three quarters of the students were able to express their ideas, even though they made minor errors in spelling, punctuation, and grammar.

  Generally, students have difficulty applying their knowledge, particularly to the world beyond the classroom.

  We should be able to have good writing and speaking skills so that we can communicate with other people . . . The maths and sciences should also be a basic educational requirement . . . Computer technology should also be an essential part of our system because many careers use computers . . . and we should be able to develop our learning skills.

  - Grade 9 Student

- **Students' writing skills are improving.**

  A 1990 study compared students' written work from the 1984 and 1990 English 30, Social Studies 30, and English 33 diploma exams. The results showed significant improvements in how students were approaching a topic, putting ideas together, and using language in their writing.

- **The majority of 500 Edmonton high school students surveyed four** years after graduation agreed that education had improved their communication and reasoning skills, and their career prospects (Krahn and Lowe, 1990).

- **The majority of the public surveyed in a recent study expressed** satisfaction with the basic skills of our students. However, almost a third of those polled expressed dissatisfaction (see Table 2).

Table 2

Public satisfaction with students' basic skills (1991)

How satisfied are you with students':	*Satisfied* %	*Dissatisfied* %	*Don't know/ No response* %
developing skills in math, science and technology	*62*	*27*	*11*
developing thinking and problem solving skills	*60*	*30*	*10*
learning to read, write and communicate	*59*	*31*	*10*

Source: *Population Research Laboratory, University of Alberta*

- **Senior executives in Alberta expect high school graduates to have a** high degree of competence in writing, reading, communicating and social studies areas (for example, history, world events, geography). They also expect positive attitudes toward lifelong learning and working. The executives are most concerned about young people's abilities to write and communicate effectively, and about their acquiring a strong work ethic (Meanwell and Barrington, 1991).

Young people don't understand that effective communications require that you listen to another and make yourself understood. They are rewarded in school for impressing . . . with their vocabulary rather than ability to communicate ideas clearly.

- Senior Executive

What we are doing

- **The Alberta Government, in cooperation with schools, school** systems, and community agencies, is working to improve the educational programs and services available to young children, especially those at risk. For example, the High Needs Program funding

provided to Edmonton and Calgary boards is helping to meet the needs of inner city school children with particular attention to language skills development.

- **We are focusing on building better information about what helps** young children develop the strong basic skills they need for school and for life. We are also committed to providing the early intervention programs that will help young children at risk be more successful.

- **We are working to ensure that all current and future curriculum** revisions emphasize student development of strong reading, writing, listening, speaking, computing, and spelling skills.

- **Alberta Education is continuing to encourage the use of** the Diagnostic Reading and Math Programs to help teachers improve student learning. We are also working with school jurisdictions to improve students' language and thinking skills.

- **We are continuing to use the provincial achievement tests and** diploma exams to assess how well Alberta's students are developing basic skills and to focus on needed improvements.

- **The Alberta Government will continue to ask a wide range of** Albertans for their views and concerns about our young people's basic skills.

We cannot be satisfied with the current level of public satisfaction with students' basic skills. We must do better.

Students stay in school

Students get the education they need: *All students must stay in school to get the education they need for citizenship and to be successful in work, training, and further education.*

Results expected

- *More students stay in school and graduate; the dropout rate decreases*
- *Students at risk stay in school and are challenged to excel and achieve their best*
- *Students have a broader range of opportunities and are recognized for excellence in all areas*

What we know

- **The number and proportion of students who drop out of Alberta** schools each year continues to decline.

  The annual dropout rate of 14 to 18 year olds in Alberta has declined from 12% in 1979-80 to 7.5% in 1989-90. Table 3 presents this information in more detail.

Table 3

Annual dropout rate (14-18 year olds)

School year	*Annual dropout rate (%)*	*Number of dropouts*
1979-80	*12.0*	*16,500*
1985-86	*9.5*	*12,900*
1989-90	*7.5*	*10,000*

Source: *Alberta Education*

- **Approximately one out of three Alberta students entering grade 9 do** not graduate from grade 12 within five years.

  More students are returning for a second year of grade 12 to complete high school diploma requirements. About 30% of non-graduating high school students continue their education at vocational colleges or through extension and correspondence courses so that they eventually earn a high school diploma. Approximately 66% of Albertans receive their diploma by age 20 and about 70% by age 26.

- **Alberta students are recognizing that staying in school improves** their career and life prospects.

  A 1990 survey of a sample of Edmonton high school students four years after graduation found that about 70% felt that their education had improved their career prospects and were quite positive about the general value of their education (Krahn and Lowe, 1990).

  We know that education contributes significantly to the personal, social, and economic well-being of individuals and of society as a whole. For example, higher levels of education translate directly into lower unemployment rates and higher average salaries. Canadian

census data show that in 1986 the average salary of university graduates was $31,292, more than double that of people with less than a grade 12 education ($14,899). Albertans who held a trade certificate or diploma in 1986 earned an average of $22,118. At the same time, the unemployment rate for Albertans with less than a grade 12 education (12.7%) was higher than for those who held a diploma or trade certificate (10.4%) and was nearly three times as high as for university graduates (4.9%). In 1988-89, 92% of employable social assistance recipients in Alberta had a grade 12 education or less (Alberta Career Development and Employment, 1990).

- **Students who drop out do so for many reasons — some school** related and some not.

  A 1991 survey of 20 year old Canadians found that the most frequently stated reasons for leaving school were boredom, preferred work to school, and problems with school work. Other stated reasons included having to work/financial reasons, teacher problems, and problems at home (Statistics Canada, 1991).

"The most frequently stated reason for leaving school was boredom . . ."

- **Many school districts in Alberta have programs in place to help** students stay in school.

  In 1991, Alberta Education published a profile of 21 dropout prevention programs in Alberta schools. The report describes programs designed to help students improve their basic skills, to provide extra individual attention to students experiencing difficulty with the curriculum, to help students develop self-esteem, and to involve parents more in the education of their children. Information about other alternative programs and schools to help youngsters at risk is also included.

What we are doing

- **The Alberta Government is increasing its efforts to get a better** handle on the dropout problem, including what else needs to be done to help students stay in school. We need better information about where young people go when they dropout, where and why they return, and what approaches are helping to reduce the dropout rate.

  All of Alberta Education's efforts are directed at developing programs that will encourage students to stay and complete school. In addition,

Alberta Education currently invests about $3 million in programs such as High Needs, which are helping students at risk of dropping out.

- **The Alberta Government is also focusing its efforts on improving** the availability and coordination of government, school, and community programs for students at risk and their families.

- **We are developing Career and Technology Studies and introduced** the Registered Apprenticeship Program (RAP) so that students are provided with the solid academic background and practical skills they need for the workplace and future training.

- **The Alberta Government is continuing to work with the federal** Department of Employment and Immigration on the START (Stay-in-School) Program. Ten projects are in place in school systems across the province for the 1991-92 school year. These projects range from additional support for students from youth workers, classroom assistants or tutors, to computer assisted learning in language arts and math skills, to a variety of work-site experiences.

- **The Alberta Government is implementing a new two-count system** for school boards for 1992-93. Student enrollments will be counted in both September and April and school boards will receive their grants based on the average of the two counts. This is intended to provide a strong incentive to school boards to keep students in school.

- **We are assessing the reactions of a wide range of Albertans to a** provincial government proposal for a single high school diploma with specializations. This diploma would recognize student accomplishments in all areas of study.

Success for Native children

Native children achieve success in school: *Our Native students must be challenged to excel and achieve their best.*

Results expected

- *Native students are well prepared for citizenship, for success in the workplace, and for the challenges of post-secondary education*
- *Schools meet the needs and interests of Native students*
- *More Native students graduate from high school*
- *Native people are satisfied with their involvement in education*
- *All students have a better understanding of Native culture and values*

vision for the nineties . . . a plan of action

What we know

- **In the 1990-91 school year about 24,000 Native students were enrolled** in Alberta's schools.
- **More than 4,000 students are enrolled in Cree and Blackfoot** language courses.
- **More than 75 local committees of Native parents and community** members are helping to improve Native education. In the mid-eighties, there were few Native Parent Advisory Committees.
- **More than 150 Native counsellors/liaison workers are helping to deal** with serious social and family problems that affect the success of Native students in our schools. They are also helping to bring about real participation of Native people in their schools.
- **The Native Education Project, in place since 1987, continues to** support schools and school boards in their efforts to increase Native student success in school and to make all students more aware of Native culture and values.
- **Preliminary findings from an Alberta Education study of 27 small** rural schools that enrol significant numbers of Native students show no measurable gains in Native and non-Native academic achievement or students' attitudes towards school and school subjects.
- **The number of dropouts is estimated to be as high as 70% for Native** youth in some remote and rural communities. This takes into consideration the four years usually required for grade 9 students to complete high school.

What we are doing

- **The Alberta Government continues to support Native education by** providing school boards with about $5 million annually.
- **Alberta Education is continuing to develop student and teacher** resources about Native people written by Native people. More than 20 basic learning resources have been prepared to fit the elementary, junior high, and grade 10 social studies curriculum. These are available to school jurisdictions throughout the province.

- **Alberta Education is continuing to work with school jurisdictions to** monitor Native student participation and achievement in school and to use the results to make improvements to the education of Native students.

  We've made some gains in developing Native language programs and involving more Native people in education. But we need to know more about what makes a real difference to Native students — what challenges them to excel and achieve their best.

- **Alberta Education, in cooperation with school jurisdictions, is** continuing to explore ways of reducing the high dropout rate of Native students, especially in schools in northern Native communities.

  We are committed to providing all Native students with the preparation they need to lead successful lives. As large numbers of Native students do not complete their education, we must take steps to do better. We also need to know more about the differences in dropout rates and graduation rates for Native students attending schools in various parts of the province.

- **We will give more attention to surveying Native students, those in** school and those who have graduated, to find out how satisfied they are with their education.

  We are focusing on getting better information about the satisfaction of parents and other members of the Native community with Native student achievement, about the ways our schools can better meet the needs of Native students, and about Native involvement in education.

- **Alberta Education is continuing to work with school jurisdictions** and other organizations to improve coordination of programs and services for Native children, to implement more culturally sensitive programs and services, and to increase the number of Native teachers.

Success for immigrant children

Children new to Canada take their full place: *Our immigrant students must get the skills they need to participate fully in our society.*

Results expected

- *Immigrant students are well prepared for citizenship, for success in the workplace, and for the challenges of post-secondary education*

vision for the nineties . . . a plan of action

What we know

- **Many immigrant children do exceptionally well in school.**

  Immigrant students continue to receive many academic awards and are recognized for excellence in a variety of endeavors including math, science, and the arts.

- **More than 4,000 of the 18,000 immigrants to Alberta in 1989-90 were** of school age. These children are new to our language, our culture, and our way of life. The number of immigrants to Alberta has just about doubled in the past five years.

  Immigrants from non-English speaking countries make up about 70% of all Alberta immigrants; in 1970, they made up about 20%. In 1990, 50% of immigrants came from Asia and the Pacific Rim countries, 24% from Europe, and 13% from Africa and the Middle East. Our education system is helping to provide immigrant children with the skills they need to be successful in our society.

- **Students new to Canada need to develop their basic English** language skills so that they can learn and participate more effectively in school and in Canadian society.

  Enrollments in English as a Second Language (ESL) programs have almost doubled since 1984. Funding is provided for three years to help students become proficient in English.

  In the future, I see the school still being a separate institution from the home, where social contact with friends is maintained. I see it being a safe place where crime is a thing of the past and it's safe to walk down the halls. Where racism and prejudice have no place or meaning. I also hope freedom and personal opinion are high priorities for both students and teachers.

  - Grade 9 Student

- **Alberta participated in an international study by the Organization** for Economic Cooperation and Development to look at ways of improving English as a Second Language programs for immigrant children. Case studies were conducted in three Alberta schools in 1989 — St. Catherine's Elementary-Junior High School and McDougall Elementary-Junior High School in Edmonton and Banff Elementary School in Banff. The results showed effective educational practices for

cultural and linguistic minorities who come to Alberta with little or no knowledge of English. Excellent instructional practices were observed in all three schools.

What we are doing

- **The Alberta Government is currently providing school jurisdictions** with more than $5 million for English as a Second Language programs. These funds assist more than 8,000 immigrant children to improve their English language skills.

- **The Alberta Government is giving increased attention to improving** the coordination and integration of government and agency programs to meet the needs of immigrant children and their families better. This includes monitoring the progress of immigrant students in school, and when they leave, in the workplace and in further study.

- **Alberta Education is continuing to assist school jurisdictions to help** parents of immigrant children be more involved in the education of their children. This includes providing services that help immigrant children and their families adjust better to our society.

- **We are developing resource materials in our ESL programs so that** young immigrant children can improve their English language skills. These materials include a resource manual for teachers and improved learning resources for students.

  We are using the results of case studies about teaching practices in schools serving immigrant students as guiding principles for developing materials for ESL. These results are also being used to clarify what we expect students with ESL needs to learn, and to improve our teacher resource manuals in all subject areas.

Doing what's best for disabled students

Meeting the needs of disabled students:
Integration into the regular classroom must be the norm for disabled students and will give them the chance they need to learn and to become full participants in our schools and in our society. Our focus must be on doing what's best for disabled students — developing their full potential.

Results expected

- *Special needs students are full participants in our schools and our society*
- *Government and community agencies coordinate their services more effectively so that special needs students have the supports they need to develop their full potential*

continued on next page

What we know

- **The new School Act requires that all students have access to** programs that meet their needs and that parents be consulted in the placement of their children. The Charter of Rights and Freedoms prohibits discrimination on the basis of disability.

  In 1989, 7% of all students in school systems received special programs for mild, moderate and severe disabilities. Almost

  10% of elementary students received assistance for some type of disability, most commonly for learning disabilities, and speech and language impairments. Approximately 7% of junior high students and 2.5% of senior high students required special assistance.

  Increasing numbers of school boards are reviewing the way they meet the special needs of students. Many are integrating these students into regular programs where it is in the students' best interests.

- **Government and community services needed by our special needs** children are not well coordinated, and in some cases are simply not available.

  The Special Education Review found that the services of government departments and community agencies are often fragmented. Although some successful coordination arrangements do operate locally and regionally, more effective mechanisms are needed to coordinate and deliver services to meet the needs of children within and outside the school.

- **Teachers are being provided with more training and development** activities to improve their ability to deal effectively with special needs students.

  Alberta Education, in cooperation with specialist councils for teachers, post-secondary institutions, and private and public agencies, provides professional development and training opportunities for individuals involved in the education of exceptional children. Approximately 1,150 teachers, administrators and paraprofessionals have taken part in workshops and conferences since November 1990.

- **About one third (500) of all Alberta schools are now accessible to the** disabled.

  Alberta Education is committed to all schools being barrier free; 39 are currently being made barrier free as part of modernization projects for 1991-94.

- *Teachers have the training, support, and learning resources they need to integrate special needs students*
- *All schools are accessible to disabled persons*
- *Parents, students and teachers are satisfied that students with special needs are well served*

What we are doing

- **Alberta Education currently provides school boards with about $123** million, over and above all the other per student funding, to respond to a variety of needs of disabled students. This includes children served through the Early Childhood Services Program. Additional funds are provided for making school buildings accessible to the disabled.

- **Alberta Education continues to help school jurisdictions provide** professional development and inservice training to teachers so that they feel more confident about integrating special needs children into regular programs.

  Teacher professional development is being improved, but much more needs to be done to support teachers in the integration of special needs children. We need to look at teacher preparation programs to assess how well they are providing teachers with the skills they need to serve special needs students. And, with the help of school administrators, teachers, and parents, we will determine what additional resources teachers require to integrate students.

- **The Alberta Government is giving more attention to the coordination** and integration of programs across government and community agencies so that the needs of special education students and their families can be met better. As well, we are developing a provincial policy on integration for Alberta's special needs students.

- **Alberta Education is continuing to work with school jurisdictions in** their efforts to integrate more special needs children into regular classrooms where it is in the students' best interests.

  This means more attention to assessing the programs and services in place for special needs students so that we know better what's making a difference and where more improvements are needed.

- **Alberta Education is developing a profile of effective integration** programs and strategies and is analyzing costs associated with various models of integration. This information will be published and made available to all school jurisdictions.

- **The Alberta Government will continue to ask Albertans — parents,** students, teachers, and others — how well special needs students are served by available programs and where more effort is needed.

- **A review of the present Special Education Program of Study and** curriculum guides will be completed in the spring of 1992. The results will be used to keep these up-to-date and reflective of the best practices for integrating special needs children.

Challenging our most capable students

Achieving and excelling: *Our brightest and most capable students must be challenged to excel.*

Results expected

- *Our most capable students are challenged and develop their talents to the fullest; they meet and exceed the standards of the best post-secondary institutions in the world*
- *Students are recognized for excellence in a broad range of endeavors*
- *Specialized schools enlarge the opportunities for students to develop their strengths and talents*

What we know

- **Our most capable academic students are doing very well.**

  A high percentage of our students performed at the standard of excellence on provincial achievement tests and diploma examinations. In 1991, a higher than expected number of students achieved the standard of excellence in grade 3 science and grade 6 mathematics. In math and science diploma exam courses, 20% or more of the students achieved excellence.

  In 1989-90, about 7,000 Alberta students were eligible for the Rutherford Scholarship which recognizes their achievement of an average of 80% or better in qualifying courses in grades 10, 11, and 12. This is an increase of about 1,000 students since the scholarship was introduced a decade ago. This scholarship program provides an incentive for high school students to achieve honors standing.

  Alberta students participating in the International Baccalaureate (IB) program scored above the world average for the past four years. In 1989-90, twelve Alberta schools provided the IB program. Graduates who complete IB courses receive advanced placement at the University of Alberta and other universities around the world.

- **Almost two out of three Alberta high school graduates go on to** further education in Alberta.

  Of this group, more than 40% enter post-secondary institutions directly (the same year they graduate from high school), and another 20% enter on a delayed basis (two or more years after high school graduation).

  In 1989-90, 16,317 Albertans gained admission to an Alberta post-secondary institution. The largest number of students went to one of the three Alberta universities — Edmonton, Calgary, and Lethbridge (see Table 4).

  More students from Alberta high schools are continuing their education at an Alberta university (4,582 in 1980-81, 5,662 in 1985-86, and 6,241 in 1989-90).

Table 4

New full-time students (direct and delayed) in post-secondary institutions from Alberta high schools (1989-90)

Institution type	*Number*	*Percent*
Universities	*6,241*	*38.2*
Technical institutes	*4,797*	*29.4*
Colleges	*5,001*	*30.6*
Hospital nursing schools	*278*	*1.7*
Total	*16,317*	*100.0*

Source: *Alberta Education*

- **School boards are providing more opportunities to challenge capable** students through academic challenge programs, alternative programs in the arts, and leadership courses.

  Some boards have designated special schools to offer programs in the fine arts or individualized approaches to learning. For example, Lester B. Pearson Senior High School and Bishop Carroll High School in Calgary, and Victoria Composite High School and Old Scona Academic High School in Edmonton offer alternative programs to challenge capable students.

What we are doing

- **Alberta Education continues to encourage flexibility so that capable** students can meet course or program expectations in less than the normal time. In addition, capable junior high students are able to earn credits for senior high school courses.

- **Alberta Education continues to provide resources and inservice** sessions for teachers to help them plan, implement, and evaluate programs for talented young people at all levels of instruction.

  A newly developed resource package for elementary and junior high teachers, *Accommodating Student Differences: A Resource for Teaching Gifted and Talented Children*, has recently been made available to school jurisdictions. The Future Problem Solving Program enables students to

apply creative skills to the study of current and future problems. Workshops are being conducted across the province on these and other resource packages.

- **Alberta Education is continuing to work with school jurisdictions to** develop better ways to deliver programs and services that meet the learning needs of our gifted and talented students.

  We are making more effort to determine how well Alberta's schools are challenging our exceptional students. We need better information about the programs and opportunities that are meeting their needs.

- **The Alberta Government will regularly survey students about how** well their programs and opportunities are meeting their needs and challenging their abilities.

- **Alberta Education is committed to recognizing student excellence in** a variety of academic, technical, artistic, athletic, and other pursuits.

  We will regularly ask and report what is being done by school jurisdictions to provide more recognition of student accomplishments and excellence in all areas of learning.

- **We will work with the business and professional communities, and** school jurisdictions, to establish public and private specialized schools in Alberta that provide more opportunities for students to develop their strengths and talents in a variety of areas of study.

- **We are taking steps to determine how many Alberta high school** graduates go on to post-secondary study in other world class institutions outside Alberta.

  We want our most capable students to meet and exceed the academic standards of the world's most highly respected institutions of learning.

Excellence in science

Building a strong future in science: *Our students must have strong backgrounds in science, be more enthusiastic about careers in science, and be able to use science and technology to understand and improve society and the world.*

Results expected

- *Alberta students excel in science, and are prepared for post-secondary education and successful careers in science*
- *More students pursue careers in science, and this improves Alberta's competitiveness in the world economy*
- *Schools, business and the science community work together effectively to improve science education*

vision for the nineties . . . a plan of action

What we know

- **Student participation and achievement in science are getting better.** Our top students are doing very well in science.

  Eleven percent of grade 3 science students achieved the standard of excellence in the provincial achievement test for 1990-91. However, overall grade 3 science results for this school year indicate not enough students are meeting acceptable standards.

  Science has always been a compulsory core course in elementary and junior high schools, but until recently many students took only one science course in senior high school. Since 1988-89, high school students must earn more credits in science.

  In 1990-91, about 20% of senior high students achieved the standard of excellence in Biology 30, Chemistry 30, and Mathematics 30, and about 25% in Physics 30.

  Since 1970-71, there has been about a 5% increase in female student enrollment in chemistry and math and about a 15% increase in physics. The proportion of male and female students currently enrolled in math and chemistry is about equal. More girls than boys take biology while more boys than girls take physics.

  In 1990-91, 44,150 students wrote diploma exams (21,272 males and 22,878 females). Close to 40% of students wrote the diploma exams in math and science courses, with the exception of Physics 30 (see Table 5).

Table 5
Percent of all students writing diploma examinations in the 1990-91 school year

Diploma exam	*Male*	*Female*	*Total*
Biology 30	*37.2*	*49.2*	*43.4*
Mathematics 30	*42.8*	*40.1*	*41.4*
Chemistry 30	*34.8*	*34.6*	*34.7*
Physics 30	*24.0*	*11.5*	*17.5*

Source: *Alberta Education*

Similar proportions of male and female students wrote the math and chemistry exams. Proportionately more girls wrote biology while more boys wrote physics.

In 1989, Alberta's colleges and universities awarded about 3,900 certificates, diplomas, and bachelor's degrees in scientific fields.

In 1991, about 250 young Albertans received a Canada Scholarship. This scholarship program helps to attract Canada's "best and brightest" students into science and engineering-related studies at Canadian universities.

- **In 1991, Alberta students rank high in science compared to other** provinces. Internationally, our junior high students are third in science but are at the middle in math. Senior high students did not do well enough on international tests conducted in the mid-eighties.

- **Science programs are improving.**

  All science programs, elementary to senior high, have been reviewed and new programs are already being offered in some grades so students will have a better foundation in science.

  The new science program for grades 7 to 9, now offered in all junior high schools, is an active, hands-on program that combines a strong basis in scientific theory with many opportunities to learn by doing. The program is supported by two series of custom-developed materials for students and teachers.

  An entirely new high school course, Science 10-20-30, has been prepared for students who want a less specialized background in science. The new program will be supported by custom-developed resources for students and teachers. About 4,600 students and 95 teachers in 29 schools are involved in field-testing the Science 10 course and custom-developed materials in 1991-92. These schools will also be involved in field-testing the new 20 and 30-level courses in 1992-93 and 1993-94.

  The Science 10 course is designed to get more students, both young men and women, interested in science and its importance to their lives. As Science 10 will give students an extra year to make career decisions, it should encourage a greater number of young men and women to explore and pursue careers in science.

Science 30 is increasingly being recognized for admission into post-secondary programs at Alberta's universities, colleges, and technical institutes.

Technological knowledge and skills are being integrated across subject areas as programs are revised. For example, in 1991 the *Computer Integration Guide: Mathematics Grades 4 to 9*, was developed to improve the problem-solving abilities of students.

- **Partnerships to improve science are emerging.**

  Over 60 professional, business, and parent groups are now helping with the senior high science programs, resources, and teacher inservice. They sit on committees, attend sessions to review learning materials, and participate in other activities through our science network. The University of Alberta provided support for inservice sessions for Science 10 field-test teachers.

What we are doing

"More hands-on assessment activities in math and science . . ."

- **We are continuing to assess the science knowledge and skills of** Alberta students in relation to other students around the world, to ensure our science programs are preparing our students to participate in a competitive world economy.

- **Alberta Education will implement all of the new Science 10-20-30 and** the 20-30 level courses in biology, chemistry, and physics by 1994.

- **We are giving more attention to monitoring student achievement in** the new junior and senior high school science programs.

  In 1993, grade 9 students will write a provincial achievement test based on the expectations set out in the new program.

  Beginning in 1995, students will write diploma exams based upon the new biology, chemistry, physics and science 30 courses.

  Alberta Education is developing more hands-on assessment activities in math and science as a suppiement to paper-and-pencil exams.

- **We are continuing to upgrade science facilities in Alberta's schools to** support high quality science and technology programs.

  From 1991 to 1994, school facility capital projects will upgrade 43 schools in 27 jurisdictions and build two new high tech senior high

schools to improve delivery of science courses. Alberta Education is working with school systems and architects to plan these new facilities.

- **We are working more closely with business, industry and post-secondary institutions to assess our programs and students' knowledge of science and to improve science education.**

  Alberta Education and the Alberta Chamber of Resources have carried out a comparative study of the secondary mathematics and science programs in Alberta, Hungary, Germany, and Japan. Individuals from the Alberta Research Council, Alberta's universities, NAIT, SAIT, and community colleges are also participating in the study. The project will assist the development of an ideal benchmark curriculum standard for math and science education, using the best of the Alberta, European, and Japanese models.

- **Alberta Education will provide information and related assistance to** school boards that want to establish specialized or "magnet" science schools for their jurisdictions.

  A comprehensive resource document is being prepared that draws on the experience of successful magnet schools in North America, and provides guidelines to assist in magnet school development. The resource document will be available at the end of the 1991-92 school year.

- **The Alberta Government will regularly survey high school students,** business and industry, and post-secondary institutions about how well our science courses have prepared students for further studies and daily life. We will continue to report on the number of students who pursue a career in science.

  We are committed to providing Alberta students with the best possible science education that enables them to lead successful lives and to make choices about science careers.

Excellence in teaching

Teachers are key: *We must support and empower teachers to meet the diverse and changing needs of students and to improve student results.*

Results expected

- *Alberta's teaching force is exemplary in its knowledge and practice; this is reflected in student performance that is second to none*
- *Teachers are better able to match their teaching strategies to the unique learning needs of each student*
- *Teachers are satisfied that their professional development opportunities improve their teaching practices*
- *Classrooms throughout Alberta and in all specialty areas have well-trained teachers*

vision for the nineties . . . a plan of action

What we know

- **We have the best educated teaching force in the history of Alberta.** The average teacher in Alberta has almost 5 years of university education and more than 13 years of teaching experience. About 97% of all Alberta teachers have university degrees.

  The Excellence in Teaching Award was given to 322 teachers in 1991. Since 1989, when this award program was initiated by the Council on Alberta Teaching Standards and the Minister of Education, 730 teachers have been recognized. They represent the many capable and dedicated teachers in this province.

- **Alberta's teachers are continuing to improve their skills.**

  Most teachers continue to further their professional knowledge and skills through personal efforts, and to participate in activities sponsored by their school jurisdictions and the Alberta Teachers' Association.

  Teachers involved in the education of gifted, talented and disabled students have participated in workshops and conferences put on by Alberta Education in cooperation with specialist councils, post-secondary institutions, and private and public agencies. These training and development activities are designed to improve teachers' ability to deal effectively with special needs students. They also help teachers feel more confident about integrating special needs children into regular classrooms.

  A 1991 survey by the Southern Alberta Professional Development Consortium found that about four out of five teachers report they could use help with student motivation, student evaluation, classroom management, and teaching thinking skills.

  Teachers report that Alberta Education's Diagnostic Reading and Math Programs are helping them to plan lessons that more effectively meet the learning needs of individual students.

  About 650 teachers in January 1991 and about the same number in June 1991 were involved in marking diploma exams. Teachers use this opportunity to discuss teaching standards and to clarify expectations for students. Many teachers report this is an excellent inservice session.

  An early eighties summary of inservice information across Canada estimated that school boards in Alberta invest about $30 million annually for inservicing teachers, or about $1,000 per teacher (Council

of Ministers of Education, Canada, 1982). This compares to about $100 per worker spent on training in the private sector in Canada in 1987 (The Conference Board of Canada, 1990).

- **Sixty-one percent of the public surveyed in a 1991 study were** satisfied with the effectiveness of teachers in our schools. However, about 25% expressed dissatisfaction (Population Research Laboratory, University of Alberta).

- **Alberta superintendents, especially those in northern parts of the** province and in other small remote school jurisdictions, are concerned about the supply of well-trained teachers.

  A 1990 survey conducted by Alberta Education and the Conference of Alberta School Superintendents found that 55% of Alberta superintendents reported teacher shortages were developing in their jurisdictions. Those in northern Alberta and smaller communities were expecting the largest teacher shortages.

  Applications for teaching positions in the province continue to be scarce in the following subject areas: French and French immersion, music/band, sciences and math/science combinations, counselling, industrial arts, home economics, and vocational education.

What we are doing

- **Alberta Education is reviewing teacher certification requirements to** ensure that they reflect the most current knowledge about effective teaching practices.

  Alberta's teacher certification requirements were last raised in the 1970s. We must ensure that Alberta's teachers have the knowledge and skills to meet the changing and diverse needs of our young people.

- **We are continuing to work closely with school jurisdictions, the** Alberta Teachers' Association, universities, and business and community organizations to provide training and professional development activities that improve teacher effectiveness.

- **Alberta Education is providing support for a consortium of school** jurisdictions to develop and deliver professional development programs to teachers. This model can be used by other districts to share resources and help teachers improve their teaching practices.

- **Together with school jurisdictions, Alberta's post-secondary** institutions, and other partners in education, we are continuing to monitor the teacher supply and demand situation. We will take whatever other steps may be necessary to assist school jurisdictions that have difficulty coping with teacher shortages.

- **We will continue to ask teachers how satisfied they are with the** available professional development opportunities and whether these are helping to improve their teaching practices.

- **We will also ask teachers how partnership arrangements with parents,** the business and professional community, and other people with different skills are helping teachers do a better job.

Excellence in schools

Schools focus on student learning: *Our schools must serve the needs of all students and improve all students' opportunities to achieve excellence.*

Results expected

- *Schools coordinate and make effective use of a variety of provincial, municipal and community programs and services to meet the needs of their students and parents better*
- *Schools are exciting and stimulating places in which their students learn and take more responsibility for their learning*
- *Schools provide the programs that meet the needs of all students*

vision for the nineties . . . a plan of action

What we know

- **Alberta's schools provide a caring environment that supports and** encourages student learning. Students learn academic skills. They develop a sense of who they are and how they fit into the world. They learn how to get along with others and what it means to be part of a community. All children have the opportunity to be the best they can be. Excellence in schools means excellence for all.

- **More schools are involving parents to improve the education** children receive. Schools are also finding more effective ways to use government and community programs and services to meet the needs of students and families better.

We can nurture citizens who are caring and competitive, who are creative and competent. It's not a case of either/or. We must do both.

- Jim Dinning

Schools recognize they cannot be responsible for meeting all of the children's needs. The school, the family, and community agencies must work together more than ever before in this time of shrinking resources.

- **During the last five years, seven building projects in Alberta (new** schools, additions, and modernizations) have received international, national, or provincial awards for excellence in design.

- **Most high school graduates rate their education as good. In a 1988** Alberta Advanced Education survey of recent high school graduates, four out of five rated the quality of education they received in high school as "good," with one in four rating it as "very good."

- **Most Albertans give a grade of B or C to the schools in their** community. A 1991 survey asked Albertans to grade the schools in their community; 69% gave them a grade of B or C (see Table 6).

  In the same survey, respondents were asked whether the public and separate schools in their community had improved, stayed the same, or become worse in the last five years. The results were: 40% felt the schools had stayed the same, 23% felt they had improved, 18% felt they had become worse, and 19% didn't know or didn't respond.

Table 6

The public's grade for Alberta schools (1991)

Students are often given the grades A, B, C, D or FAIL to indicate the quality of their work. If the schools in your community were graded in this way, what grade would you give them?

Grade	*Percent*
A	*5*
B	*36*
C	*33*
D	*7*
FAIL	*2*
Don't know/No response	*17*

Source: *Population Research Laboratory, University of Alberta*

Respondents were also asked about their satisfaction with what students are learning. Fifty-five percent were satisfied that students are developing a sense of self-worth and confidence; 48% were satisfied that students are learning social values such as tolerance and cooperation (Population Research Laboratory, University of Alberta).

What we are doing

- **The Alberta Government is increasing its efforts to improve the** coordination of programs and services across government departments and community agencies so that children's needs can be met better. We will also give increased attention to helping school jurisdictions make more effective use of government and community funded programs to support and enhance education.

- **We are continuing to encourage school jurisdictions to improve** parent and community involvement in our schools in ways that make a difference for student learning. We are also encouraging school jurisdictions to look at ways that our school facilities can serve a broader range of student, family, and community needs.

- **The Alberta Government is investing $700 million to build or** renovate Alberta schools in its five year capital plan, 1991 to 1995. Some of the new schools are designed to house community and social services, others feature state of the art technology.

Equity of opportunity for students

More Equitable Access to Educational Opportunities: *All of our children, regardless of their social or cultural background or the wealth of the community in which they live, must have equitable opportunities to get the education they need. School jurisdictions must have more equitable access to the fiscal resources they need to provide the best possible education for their students.*

Results expected

- *All schools have access to the resources required to provide equitable opportunities to all students, regardless of where they live and regardless of the wealth of their community*
- *Albertans are satisfied with the quality of education*

continued on next page

What we know

- **Alberta's School Act guarantees equity of opportunity to all students.**

  The principle of equity raises fundamental issues — the definition of social justice, how to raise and distribute revenues, and the roles of the province and school jurisdictions. Fiscal equity among school jurisdictions is a key issue.

- **All school boards do not have equitable access to resources.**

  Differences in the wealth of Alberta school jurisdictions are wide. In 1990, one mill of property assessment raises as little as $54 per resident student, or as much as $2,500.

  Because some school boards have a larger tax base than others, the provincial government in 1990-91 provided $68 million in fiscal equity grants to school jurisdictions that have a below-average property tax base. This amount was $20 million short of the $88 million actually required by these boards to bring them up to the provincial average.

  Despite provincial equity funding, expenditures per student vary widely. In 1985, the difference between the lowest expenditure per student and the highest was $10,000. In 1990, the gap widened to $16,500. Some school jurisdictions now spend about six times more per student than others.

- **The range of education programs and services varies widely across** the province.

  This disparity in the funds available to school jurisdictions results in inequitable opportunities for students. For example, the number of courses available to high school students ranges from 20 in some school jurisdictions to 200 in others.

  Distance learning has helped reduce some of the disparities in courses offered. It is giving more students access to courses regardless of where they live in the province — students in small schools, in remote areas, those who prefer independent study. In 1990-91, distance learning courses were offered to 115 schools and 8,178 students.

  Alberta Education's High Needs Program is helping the Edmonton and Calgary boards to provide students at risk in some schools with enhanced programs and services — improving their attendance, attitudes toward school, achievement, and self-esteem.

- *Francophone students have better access to programs in their own language*
- *School jurisdictions work together more effectively to improve education*

Six schools in Alberta offer programs for students who have the right to be educated in the French language under section 23 of the Charter of Rights and Freedoms.

What we are doing

- **The Alberta Government currently provides school boards with** about $68 million in fiscal equity grants and about another $10 million in a variety of other equity grants to help provide students with equitable access to programs that meet their needs.

- **We are committed to resolving the equity issue in a fair and just** manner.

  We must find a long-term solution to the fiscal equity issue so that all school jurisdictions have more equitable access to the fiscal resources required to meet students' needs. The Provincial Government has been meeting with representatives from the three local government associations and the Alberta School Boards Association for nearly a year to resolve the fiscal equity problem.

- **Alberta Education is continuing to encourage school jurisdictions to** use more flexible schedules and structures to expand access to education. This includes the increased use of distance learning technology.

- **Alberta Education is encouraging more consortia and cooperation** among school jurisdictions as a way of improving educational opportunities for students.

- **The Alberta Government will regularly ask Albertans how satisfied** they are with their access to education programs and services. We will also survey students about their access to programs that meet their needs.

- **Alberta Education is continuing to monitor the long-term effect of** programs and services that are intended to improve equitable opportunities for students such as distance education and francophone schools.

Building partnerships

Dynamic and Productive Partnerships: *All who have a stake in a successful education system — students, parents, business leaders, educators, and other community members — must work together to make education better for our students.*

Results expected

- Parents are more actively involved in decisions affecting the education of their children
- Parents, the business and professional community, students, and other stakeholders are well informed about educational standards and results, and are actively involved and supportive of education; this improves the education that students receive

continued on next page

What we know

- **School-community partnerships are increasing in Alberta.**

  Most high schools in Alberta have some form of community partnership through their cooperative education and work experience programs. These partnerships enable high school students to combine their academic work with experience working in business and industry.

  Partnerships in elementary and junior high schools also involve bringing community members into the school and taking students out into the community for field trips and other activities.

  Over 400 groups and individuals from business and industry, labor, and post-secondary institutions, as well as professional, community and government agencies, are involved in a network that is helping to develop the new Career and Technology Studies program.

  Businesses such as Digital, Apple, Campus America and Vicom are helping to implement technology in Alberta classrooms.

  Junior Achievement developed materials for students to use in Business Studies 9.

  This year, the partnership between Sherwood Community Junior High School in Calgary and Canadian Hunter Exploration Limited won the National Award for Excellence in Business Education Partnerships from the Conference Board of Canada.

- **Parent groups are active in many schools in Alberta; most schools** have a parent advisory group.

  In a 1990 Alberta Education survey of parent advisory groups, one third of parent groups saw themselves providing more help and advice to the school over the next couple of years.

  The school, parent, student connection is to me an absolutely essential component if one is looking at the best possible opportunity for our child's education.

  - Parent

- **A committee of business and professional people has worked with** staff in the Diploma Examinations Program to identify real-life applications of mathematics. The group helped to outline workplace problems that require the use of mathematics appropriate for senior

• *There are more joint efforts among school jurisdictions to improve education*

high school students. The result of this collaboration is a resource book for teachers, entitled *Mathematics at Work in Alberta*. It is being published by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA).

- **The Registered Apprenticeship Program (RAP) provides** opportunities for senior high students to obtain a high school diploma while gaining "real world" work experience as registered apprentices. Students are interviewed, hired and, as apprentices, paid apprentice wages. Scheduling of school and work time is agreed to by the employer, the student, and the school. Twenty-four high schools throughout Alberta are part of RAP this year.

- **Senior executives in Alberta believe that business and industry need** to know a lot more about what is going on in schools, and that students need to be much better informed about the workplace (Meanwell and Barrington).

What we are doing

- **We are committed to ensuring that all who have a stake in education** are well informed and are more actively working together to make education better for our students.

  Alberta Education is continuing to support increased parent participation and responsibility, more effective involvement by the business and professional community, better linkages with post-secondary institutions, and more joint efforts among school jurisdictions to enhance education for our students.

- **Alberta Education, in cooperation with students, parents, business** leaders, educators, and other community members, will increase its efforts to monitor and review current and future partnerships. We will determine how they are making a difference for our students and what needs to be done to improve their effectiveness.

- **The Alberta Government is making more effort to improve the** coordination of provincial departments so that they are working together in the best interests of Alberta's students.

Next steps

This is the first report on our progress toward achieving the vision. It states clearly where we are now, where we need to do better, and what we're doing to improve. We have built a solid foundation for excellence in Alberta; however, more focused efforts are needed in many areas so that all our students achieve their potential.

A major shortcoming of the report is that it does not include much information about the results that schools, school systems, and our other partners are achieving to make the vision a reality for our students. We still need to fill many information gaps so that we can do a better job of reporting the results of our individual and collective efforts.

What do we expect Albertans to do with this report and *Vision for the nineties . . . a plan of action*? First, we want you to see that Alberta's students are achieving solid results. Second, we want you to ask how your own schools and school systems are doing in these priority areas. Most importantly, get involved and assess your local needs, set goals, and take action that will help move education forward!

Next year's report will build on these important beginnings. It will provide more complete information about how our students and our education system are improving in the priority areas of the vision. It will also speak clearly to the accomplishments and the changes that all the partners in education are achieving together to provide ***"the best possible education for all Alberta students."***

For additional information, please contact one of the following:

Reno Bosetti
Deputy Minister
Alberta Education
10th floor, West Devonian Building
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
427-2889 Fax: 422-9735

Gary Zatko
Assistant Deputy Minister
Planning and Information Services
11160 Jasper Avenue
3rd floor, East Devonian Building
Edmonton, Alberta T5K 0L2
427-2991 Fax: 422-5255

Roger Palmer
Assistant Deputy Minister
Student Programs & Evaluation
5th floor, East Devonian Building
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
422-1608 Fax: 422-5129

Steve Cymbol
Assistant Deputy Minister
Regional Services
4th floor, East Devonian Building
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
427-7484 Fax: 422-1400

Brian Fennell
Acting Assistant Deputy Minister
Financial Services
6th floor, West Devonian Building
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
427-2988 Fax: 427-5930

Percy Mirochnick
Acting Director, Policy & Planning Branch
3rd floor, East Devonian Building
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
422-4037 Fax: 422-5255

Calgary Regional Office
Gerry Wilson, Director
Rm. 1200, Rocky Mt. Plaza
615 Macleod Trail, S.E.
Calgary, Alberta T2G 4T8
297-6353 Fax: 297-3842

Edmonton Regional Office
Russ Wiebe, Director
11160 Jasper Avenue
Edmonton, Alberta T5K 0L2
427-2952 Fax: 422-9682

Grande Prairie Regional Office
Ron Smith, Director
12th floor, 214 Place
9909 – 102 Street
Grande Prairie, Alberta T8V 2V4
538-5130 Fax: 538-5135

Lethbridge Regional Office
Carol McLean, Director
Provincial Building
200-5 Avenue, South
Lethbridge, Alberta T1J 4C7
381-5243 Fax: 381-5734

Red Deer Regional Office
Fred Reinholt, Director
3rd floor West, Provincial Building
4920 – 51 Street
Red Deer, Alberta T4N 6K8
340-5262 Fax: 340-5305

Paul Taylor
Executive Assistant to the Minister
402 Legislature Building
Edmonton, Alberta T5K 2B6
427-2025 Fax: 427-5582

Peggy Garritty
Director, Communications Branch
11160 Jasper Avenue
2nd Floor West Devonian Building
Edmonton, Alberta T5K 0L2
427-2285 Fax: 427-0591

References

Alberta Advanced Education. *1988 High School Graduate Survey*. 1988.

Alberta Career Development and Employment. *Labour Force Characteristics of Albertans without High School Diplomas*. Labour Market Research Division, 1990.

Alberta Education. *Achievement Testing Program Provincial Report 1991*. Student Evaluation Branch, 1991.

Alberta Education. *Annual Report Diploma Examinations Program*. Student Evaluation Branch, 1990.

Alberta Education. *A Study of the Impact of the School Council Section in the 1988 School Act*. Policy and Evaluation Branch, 1991. A survey of 31 school jurisdictions.

Alberta Education. *Diploma Examinations Program Annual Report 1991*. Student Evaluation Branch, 1991.

Alberta Education. *Education and Cultural and Linguistic Pluralism in Alberta: The OECD Project*. Language Services Branch, 1991.

Alberta Education. *Education in Alberta: Facts and Figures*. Planning and Policy Secretariat, 1989.

Alberta Education. *Enhancing English as a Second Language Learning in Alberta Action Plan*. Language Services Branch, 1991.

Alberta Education. *Guide to Education: Elementary School Handbook (ECS to Grade 6)*. Curriculum Branch, 1990.

Alberta Education. *Guide to Education: Junior High School Handbook*. Curriculum Branch, 1991.

Alberta Education. *Guide to Education: Senior High School Handbook*. Curriculum Branch, 1991.

Alberta Education. *Native Education in Alberta: Alberta Native People's Views on Native Education*, 1987.

Alberta Education. *Native Education in Alberta's Schools. Policy Statement*, 1987.

Alberta Education. *Patterns and Processes: Approaches to Writing by Grade 12 Students*. Student Evaluation Branch, 1991.

Alberta Education. *Proceedings of the Minister's Forum on Special Education*. Curriculum Branch, 1991.

Alberta Education. *Profiles of 21 Dropout Prevention Programs in Alberta Schools*. 1991.

Alberta Education. *Provincial Report Achievement Testing Program*. Student Evaluation Branch, 1990.

Alberta Education. *Special Education Review Action Plan*. Education Response Centre, 1991.

Alberta Education. *Stay in—You Win: Module Two. Dropouts: Problems and Solutions*. (in press).

Alberta Education. *Update on Teacher Supply and Demand in Alberta, 1990/91*. Planning and Information Services Division, 1991.

Association of Professional Engineers, Geologists and Geophysicists of Alberta. *Mathematics at Work in Alberta*. (in press).

Crocker, R.K. *Science Achievement in Canadian Schools: National and International Comparisons*. Ottawa: Economic Council of Canada, 1990.

Gallup Canada, Inc. *Alberta Education 1988 Tracking Study*, 1988.

Government of Alberta. *Secondary Education in Alberta Policy Statement*. 1985.

Government of Alberta. *The Premier's Council on the Status of Persons with Disabilities: Action Plan*. 1990.

International Association for the Evaluation of Educational Achievement. *Science Achievement in Seventeen Countries: A Preliminary Report*. Oxford: Pergamon Press, 1988.

Johnson, C.G. *Globalization: Canadian Companies Compete*. International Business Research Centre, The Conference Board of Canada, 1990.

Krahn, H. and Lowe, G. S. *The School to Work Transition in Edmonton, 1985 – 1989*. Alberta Education and Alberta Career Development and Employment, 1990.

Lapointe, A.E., Mead, N.A., and Askew, J.M. *Learning Mathematics*. International Assessment of Educational Progress II. Princeton, N.J.: Educational Testing Service, 1992.

Lapointe, A.E., Askew, J.M. and Mead. N.A. *Learning Science*. International Assessment of Educational Progress II. Princeton, N.J.: Educational Testing Service, 1992.

Meanwell, R.J. and Barrington, G.V. *Senior Executive Views on Education in Alberta*. Alberta Education, 1991. A survey of 60 senior executives in Alberta.

Mohan, M. An Overview of In-Service Education and Training on Teachers (INSET) in the Provinces of Canada. Council of Ministers of Education, Canada, 1982.

Population Research Laboratory, University of Alberta. *1991 Alberta Survey*. Alberta Education, 1991. A random sample of 1,345 adult Albertans surveyed by telephone in February and March, 1991.

Statistics Canada. *Education in Canada: A Statistical Review for 1989/90*. Catalogue 81-229. Ottawa, 1991.

Statistics Canada. *School Leavers Survey*. Employment and Immigration Canada, 1991.

Southern Alberta Professional Development Consortium. *1990-91 Annual Report*.